

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1. (Currently Amended) An image processing apparatus capable of processing drawing a gradient fill object defined by at least two apexes each having coordinate data and gray level value, comprising:

detection means for detecting whether or not an object is a gradient fill object having gradation in one of horizontal and vertical directions;

pixel count detection means for detecting [[the]] a number of pixels which have gradation with defined range substantially same gray level value and are consecutively present in a direction perpendicular to the direction of gradation detected by said detection means; [[and]]

drawing means for drawing at least one pixel for different gray level values in the direction of gradation, based on the coordinate data and gray level value of the gradient fill object; and

replacement replication means for replacing replicating, in the direction perpendicular to the direction of gradation, the pixels drawn by said drawing means in a number equal to the number of pixels detected by said pixel count detection means with gradation of a start pixel located at a start position of the pixels.

2. (Currently Amended) The apparatus according to claim 1, wherein said ~~replacement replication~~ means copies gray level values, obtained by gray level calculation for all pixels of a first row of a gradient fill object having gradation in the horizontal direction, in a number equal to the detected number of pixels ~~and replaces pixels of rows next to the first row with the gray level values.~~

3. (Currently Amended) The apparatus according to claim 1, wherein said ~~replacement replication~~ means copies gray level values, obtained by gray level calculation for all pixels of a first column of a gradient fill object having gradation in the vertical direction, in a number equal to the detected number of pixels ~~and replaces pixels of columns next to the first column with the gray level values.~~

4. (Currently Amended) The apparatus according to claim 1, wherein said ~~replacement replication~~ means divides the pixels which have gradation with defined range and are consecutively present in the same row or same column into a plurality of pixel groups each including pixels in an equal number of pixels sequentially from the first pixel, and in unit[[s]] of each pixel group[[s]] belonging to the plurality of pixel groups, draws a first pixel belonging to the each pixel group at a gray level value and replaces replicates the gray level value[[s]] of the first pixel [[of]] for all pixels belonging to the each pixel group with the gray level values of a first pixel belonging to the pixel group.

5. (Currently Amended) An image processing method capable of processing drawing a gradient fill object defined by at least two apexes each having coordinate data and gray level value, comprising:

[[the]] a detection step, of detecting whether or not an object is a gradient fill object having gradation in one of horizontal and vertical directions;

[[the]] a pixel count detection step, of detecting the number of pixels which have gradation with defined range substantially same gray level value and are consecutively present in a direction perpendicular to the direction of gradation detected in the detection step; [[and]]

a drawing step, of drawing at least one pixel for different gray level values in the direction of gradation, based on the coordinate data and gray level value of the gradient fill object; and

the replacement a replication step, of replacing replicating, in the direction perpendicular to the direction of gradation, the pixels drawn in said drawing step in a number equal to the number detected in [[the]] said pixel count detection step with gradation of a start pixel located at a start position of the pixels.

6. (Currently Amended) The method according to claim 5, wherein the replacement said replication step comprises a step of copying gray level values, obtained by gray level calculation for all pixels of a first row of a gradient fill object having gradation in the horizontal direction, in a number equal to the detected number of pixels and replaces pixels of rows next to the first row with the gray level values.

7. (Currently Amended) The method according to claim 5, wherein the replacement said replication step comprises a step of copying gray level values, obtained by gray level calculation for all pixels of a first column of a gradient fill object having gradation in the vertical direction, in a number equal to the detected number of pixels and replaces ~~pixels of columns next to the first column with the gray level values.~~

8. (Currently Amended) The method according to claim 5, wherein the replacement said replication step comprises the steps of dividing the pixels which have gradation ~~with defined range~~ and are consecutively present in the same row or same column into a plurality of pixel groups each including ~~pixels in~~ an equal number of pixels sequentially from ~~the first pixel~~, and in unit[[s]] of each pixel group[[s]] belonging to the plurality of pixel groups, drawing a first pixel belonging to the each pixel group at a gray level value and replacing replicating said gray level value[[s]] of the fist pixel [[of]] for all pixels belonging to the each pixel group with the gray level values of a first pixel belonging to the pixel group.

9. (Currently Amended) A computer-readable storage memory which stores a control program capable of processing drawing a gradient fill object defined by at lease two apexes each having coordinate data and gray level value, said program comprising:

a code of [[the]] a detection step of detecting whether or not an object is a gradient fill object having gradation in one of horizontal and vertical directions;

a code of [[the]] a pixel count detection step of detecting the number of pixels which have ~~gradation with defined range~~ substantially same gray level value and are consecutive in a direction perpendicular to the direction of gradation detected in code of the detection step; [[and]]

a code of a drawing step of drawing at least one pixel for different gray level values in the direction of gradation, based on the coordinate data and gray level value of the gradient fill object; and

a code of the replacement a replication step of replacing replicating, in the direction perpendicular to the direction of gradation, the pixels drawn in the drawing step in ~~number equal to~~ the number detected in the code of the pixel count detection step ~~with~~ gradation of a start pixel.

10. (New) An image processing method of drawing a gradient fill object defined by at least two apexes, each having coordinate data and gray level value, comprising the steps of:

judging whether or not an object is a gradient fill object having gradation in horizontal direction or vertical direction; and

drawing the object by drawing at least one pixel for different gray level values in a plurality of pixels consisting of the object and replicating the drawn at least one pixel for pixels having substantially same gray level value as that of the drawn at least one pixel, when it is judged that the object is gradient fill object having a gradation in a horizontal direction or a vertical direction.

11. (New) An image processing method of drawing a gradient fill object defined by at least two apexes each having coordinate data and gray level value, comprising the steps of:

judging whether or not an object is a gradient fill object having gradation in a horizontal direction; and

drawing the object by drawing pixels consisting of a line in a horizontal direction based on the coordinate data and gray level value and arranging the drawn pixels consisting of the line contiguously in a vertical direction, when it is judged that the object is a gradient fill object having gradation in the horizontal direction.

12. (New) An image processing method of drawing a gradient fill object defined be at least two apexes, each having coordinate data and gray level value, comprising the steps:

judging whether or not an object is a gradient fill object having gradation in a vertical direction; and

drawing the object by drawing at least one of pixels consisting of a line having substantially a same gray level value in a horizontal direction, replicating the drawn at least one pixel in a number of pixels consisting of the line, and repeating the drawing and replicating in the number of lines in the object, when it is judged that the object is a gradient fill object having gradation in the vertical direction.